

ABSTRACT

In the on-vehicle radar apparatus of the present invention,
the vertical scanning width of the radar beam is narrowed,
5 before the horizontal scanning, thereby avoiding
unnecessary data processing and improving the data
processing efficiently. Further, the S/N ratio of the target
detection signal is increased, thereby stabilizing the
distance detection and its accuracy. The vertical scanning
10 antenna is a single travelling wave excitation antenna
(TWEA) constructed by a plurality of antenna elements.
At the same time, the horizontal scanning antenna is a
multi-channel antenna wherein a plurality of TWEAs is
assigned to a plurality of horizontal directions. The
15 horizontal scanning angle is arbitrarily widened by
increasing the number of TWEAs.

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